

The City of Kalamazoo's Use of Local Ordinances to Support Source Water Protection Efforts

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One could state that the City of Kalamazoo has been in the wellhead protection business since 1972, long before the terms were incorporated into the 1986 Amendments to the Federal Safe Drinking Water Act. It was 1972 when the City created a Sanitation Isolation Ordinance that recognized the need to keep certain land uses an appropriate distance from its Water Pumping Station 1. Later in the 1970s and early 1980s, the City implemented a cross-connection program and expanded its Sanitation Ordinance to other primary wellfields to minimize contamination risks.

Since 1992, the City has had an organized Wellhead Protection Program (WHPP). In 2003, the City obtained approval for its WHPP from the MDEQ after implementing a comprehensive approach, including completion of six groundwater flow models for its 19 wellfields and 102 production wells, six contaminant source inventories, and an active public education and outreach program. In 2004, the City received the Exemplary Wellhead Protection Program Award.

For several years, the City considered an Ordinance as a primary strategy to minimize risk to its drinking water supply aquifers. In 2000/01, City staff reviewed both model and actual groundwater protection ordinances. From 2002 through 2005, staff prepared draft ordinances, slowly but methodically refining its approach. Staff also worked with consultants to draft Performance Standards and assist in linking them with the Wellhead Protection Zoning Overlay.

Environmental legal counsel was retained to review identified issues, such as regulating private wells, non-conforming uses, use of multiple capture zones, use of the MDEQ's Minimum Well Isolation Distances Guidance, and existing liability and defense provisions in federal and state law and their relevance to municipal ordinances (e.g. Michigan's underground storage tank regulations, oil and gas wells, landfills, Michigan's Right to Farm Act, spill reporting requirements, water withdrawals). A public survey conducted in April 2006 of 2,000 randomly selected county residents determined

75% supported the use of an Ordinance as a management strategy to protect drinking water supplies.

Subsequently, both the Wellhead Protection Zoning Overlay and Performance Standards were designed to work together to serve the following objectives:

1. *Prevent the establishment or creation of non-compatible land uses within the WHPAs that have a high risk of contaminating groundwater resources used for drinking water and/or would limit the City's ability to obtain MDEQ well permits to replace or add wells.* This is accomplished by using the Wellhead Protection Zoning Overlay that contains prohibited and conditioned land use activities within the 1-Year and 10-Year Capture Zones. In addition, MDEQ's guidelines on well isolation distances are used "in reverse" by prohibiting proposed activities that violate the isolation distance recommendations. It is expected that a decrease in land use activities inconsistent with those specified in the well isolation distance guideline should make future well permits easier to obtain.
2. *Protect drinking water supplies from spills, leaks, and other releases into the groundwater caused by improper storage, handling, use, production, or discharge of Regulated Substances.* This is accomplished by using the document "Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones and Stormwater Quality Management" that is referenced in the Zoning Overlay. The Performance Standards provide protective measures/best management practices for the prevention or

minimization of releases of Regulated Substances that could impact water quality. The Performance Standards include a groundwater contamination risk assessment; general and land use specific site plan review standards; stormwater quality management criteria; and references to relevant environmental regulations. Existing non-conforming uses pursuant to the Wellhead Protection Zoning Overlay are required to incorporate performance standards and/or prepare a Spill Contingency Plan within two years of adoption of the Wellhead Protection Zoning Overlay.

3. *Prevent or minimize losses due to contamination of the public water supply by avoiding expenditure of public funds for costly pollution remediation projects and/or replacement of Public Water Supply System assets.* Obviously, it is more cost-effective to prevent contamination than react to it once it occurs as was illustrated by the historic necessity to renovate two wellfields/pumping stations with air stripping capabilities at the cost of millions of dollars. In addition, contamination concerns have forced temporary non-use and limited use of other wellfields.
4. *Minimize interruptions to businesses by only regulating specific land use activities within specific designated wellhead protection capture zones, as based upon determined potential risk to the Public Water Supply System.* First, the total amount of regulated area is minimized by using scientifically-derived Capture Zones rather than the City's entire jurisdictional area. Second, the addition of the 1-Year Capture Zone along with the standard 10-Year Capture Zone addresses risk in a more equitable manner by only addressing relatively high-risk activities in the smaller high-sensitivity areas, thus decreasing land use restrictions within the 10-Year Capture Zone.

requirements to report the release of Regulated Substances and to secure, report the closure of, and remove Regulated Substances from inactive facilities. The Overlay also contains a process for variances and appeals, and allows for abatement/remedial activities to be conducted by the Department of Public Services

In late 2006, an outreach process began for both the Zoning Overlay and the Performance Standards to solicit comments from various organizations, including the WHP Team, the City's Environmental Concerns Committee, the Kalamazoo County Chamber of Commerce Environmental Affairs Committee, the Kalamazoo County Environmental Health Advisory Council, and a City multi-departmental administrative team. In early 2007, additional presentations were provided to the WHP Team and the City's administration. Internal legal counsel edited and shortened the ordinance, challenged staff to defend the necessity and applicability of various sections, and re-formatted it for the City's Code of Ordinances.

The adoption process of the "Wellhead Protection Zoning Overlay" and the "Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones and Stormwater Quality Management" was extensive. The process included: preparing Planning Commission Staff Reports, publishing Legal Ads, presenting to the City Planning Commission, preparing minor text amendments, preparing City Commission Agenda Reports, preparing for mandatory formal readings to the City Commission, holding a Public Forum, and answering questions by City Commissioners. The City Commission unanimously adopted both the Zoning Overlay and the Performance Standards on May 21, 2007, becoming effective on May 31, 2007.

To view the documents referenced above, please visit the following link:

http://www.kalamazoocity.org/portal/government.php?page_id=500

In addition, the Zoning Overlay contains